

WHAT IS CLAIMED IS:

1. A driving control apparatus for a vehicle, comprising:
 - an engine which generates power by fuel combustion;
 - a transmission which changes engagement/disengagement states of plural frictional engagement devices so as to realize plural shift speeds whose gear ratios are different from each other;
 - 5 a fuel cut device which stops fuel supply to the engine when a predetermined fuel cut condition including a condition that the vehicle is coasting with a throttle valve of the engine being fully closed is satisfied;
 - 10 a coasting time disengagement restricting device which maintains a high speed side frictional engagement device in an engagement state until a low speed side frictional engagement device obtains a predetermined torque capacity at a time of automatic downshifting of the transmission during coasting; and
 - 15 a disengagement restriction stop device which stops control by the coasting time disengagement restricting device so as to reduce a torque capacity of the high speed side frictional engagement device, when control by the fuel cut device is cancelled and fuel supply is restarted in a case where downshifting of the transmission is output while fuel supply is stopped by the fuel cut device and the high speed side frictional engagement device is maintained in the engagement state by the coasting time disengagement restricting device.
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2. The driving control apparatus for a vehicle according to claim 1, wherein, in a case where downshifting of the transmission is output while fuel supply is stopped by the fuel cut device, and the high speed side frictional engagement device is maintained in the engagement state by the coasting time disengagement restricting device, when control by the fuel cut device is cancelled and fuel supply is restarted, the disengagement restriction stop device stops control by the coasting time disengagement restricting device and reduces a torque capacity of the high speed side frictional engagement device to substantially zero.
- 30 3. The driving control apparatus for a vehicle according to claim 1, wherein a fuel cut start condition for stopping fuel supply to the engine is the same as a fuel cut cancellation condition for restarting the fuel supply in the fuel cut device.

4. The driving control apparatus for a vehicle according to claim 1,
wherein an engine speed in a fuel cut start condition for stopping the fuel supply to
the engine is higher than an engine speed in a fuel cut cancellation condition for
5 restarting fuel supply by a predetermined value in the fuel cut device.

5. The driving control apparatus for a vehicle according to claim 1,
wherein an engine speed in a fuel cut start condition for stopping the fuel supply to
the engine is higher than an engine speed in a fuel cut cancellation condition for
10 restarting the fuel supply by a predetermined rate in the fuel cut device.

6. The driving control apparatus for a vehicle according to claim 1,
wherein a fuel cut start condition for stopping the fuel supply to the engine includes a
condition that an operation amount of an accelerator pedal has been substantially zero
15 for a predetermined time or more.

7. A driving control apparatus for a vehicle, comprising:
an engine which generates power by fuel combustion;
a transmission which changes engagement/disengagement states of
20 plural frictional engagement devices so as to realize plural shift speeds whose gear
ratios are different from each other; and
a controller which stops fuel supply to the engine when a
predetermined fuel cut condition including a condition that the vehicle is coasting
with a throttle valve of the engine being fully closed is satisfied; which maintains a
25 high speed side frictional engagement device in an engagement state until a low speed
side frictional engagement device obtains a predetermined torque capacity at a time of
automatic downshifting of the transmission during coasting; and which stops control
for maintaining the high speed side frictional engagement device in the engagement
state during coasting, and reduces a torque capacity of the high speed side frictional
30 engagement device when control of fuel cut is cancelled and fuel supply is restarted in
a case where downshifting of the transmission is output while fuel supply is stopped
and the high speed side frictional engagement device is maintained in the engagement
state.

8. The driving control apparatus for a vehicle according to claim 7, wherein the controller stops control for maintaining the high speed side frictional engagement device in the engagement state during coasting, and reduces a torque capacity of the high speed side frictional engagement device to substantially zero 5 when control of fuel cut is cancelled and fuel supply is restarted in the case where downshifting of the transmission is output while fuel supply is stopped and the high speed side frictional engagement device is maintained in the engagement state.

9. A control method of a driving control apparatus for a vehicle including 10 an engine which generates power by fuel combustion, a transmission which changes engagement/disengagement states of plural frictional engagement devices so as to realize plural shift speeds whose gear ratios are different from each other, comprising the steps of:

15 stopping fuel supply to the engine when a predetermined fuel cut condition including a condition that the vehicle is coasting with a throttle valve of the engine being fully closed is satisfied;

20 maintaining a high speed side frictional engagement device in an engagement state until a low speed side frictional engagement device obtains a predetermined torque capacity at the time of automatic downshifting of the transmission during coasting; and

25 stopping control for maintaining the engagement state of the high speed side frictional engagement device during coasting so as to reduce the torque capacity of the high speed side frictional engagement device when control of the fuel cut is cancelled and fuel supply is restarted in a case where downshifting of the transmission is output while fuel supply is stopped and the high speed side frictional engagement device is maintained in the engagement state.

10. The control method of the driving control vehicle for a vehicle according to claim 9, further comprising the steps of:

30 stopping control for maintaining the high speed side frictional engagement device in the engagement state during coasting so as to reduce a torque capacity of the high speed side frictional engagement device to substantially zero

when control of fuel cut is cancelled and fuel supply is restarted in a case where downshifting of the transmission is output while fuel supply is stopped and the high speed side frictional engagement device is maintained in the engagement state.

5 11. The control method of the driving control apparatus for a vehicle according to claim 9, wherein a fuel cut start condition for stopping fuel supply to the engine is the same as a fuel cut cancellation condition for restarting the fuel supply.

10 12. The control method of the driving control apparatus for a vehicle according to claim 9, wherein an engine speed in a fuel cut start condition for stopping fuel supply to the engine is higher than an engine speed in a fuel cut cancellation condition for restarting the fuel supply by a predetermined value.

15 13. The control method of the driving control apparatus for a vehicle according to claim 9, wherein an engine speed in a fuel cut start condition for stopping the fuel supply to the engine is higher than an engine speed in a fuel cut cancellation condition for restarting the fuel supply by a predetermined rate.

20 14. The control method of the driving control apparatus for a vehicle according to claim 9, wherein a fuel cut start condition for stopping the fuel supply to the engine is a condition that an operation amount of an accelerator pedal has been substantially zero for a predetermined time or more.